

Notice of Allowability

Application No.

09/764,457

Examiner

Phillip A Johnston

Applicant(s)

UTO ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 12-09-2003.
2. ☒ The allowed claim(s) is/are 1,2,4-12,15,16 and 18-20.
3. ☒ The drawings filed on 19 January 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6 <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No. <u>15</u> . |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No. _____ | 7 <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other _____ |

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	09/764,457	UTO ET AL.	
	Examiner	Art Unit	
	Phillip A Johnston	2881	

All Participants:

(1) Phillip A Johnston.

(2) Melvin Kraus.

Status of Application: _____

(3) _____.

(4) _____.

Date of Interview: 15 January 2004

Time: 2:30PM

Type of Interview:

- ☒ Telephonic
☐ Video Conference
☐ Personal (Copy given to: ☐ Applicant ☐ Applicant's representative)

Exhibit Shown or Demonstrated: ☐ Yes ☐ No

If Yes, provide a brief description: _____

Part I.

Rejection(s) discussed:

Final dated 9-09-2003

Claims discussed:

1, 12 and 19

Prior art documents discussed:

none


Part II.

SUBSTANCE OF INTERVIEW DESCRIBING THE GENERAL NATURE OF WHAT WAS DISCUSSED:

Mr Kraus approved Examiner recommendation to make Claims 12 and 19 dependent on allowed Claim 1

Part III.

- ☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview directly resulted in the allowance of the application. The examiner will provide a written summary of the substance of the interview in the Notice of Allowability.
☐ It is not necessary for applicant to provide a separate record of the substance of the interview, since the interview did not result in resolution of all issues. A brief summary by the examiner appears in Part II above.


 JOHN R. LEE
 SUPERVISORY PATENT EXAMINER
 TECHNOLOGY CENTER 2800

(Examiner/SPE Signature)

(Applicant/Applicant's Representative Signature – if appropriate)

Detailed Action

Examiners Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Melvin Kraus on 1-15-2004. The changes made below are underlined.

The Claims are amended as follows

-- 12. (currently amended) A defect inspection apparatus for detecting defects in microscopic patterns formed on an object to be inspected, with using an ultraviolet laser ray, comprising:

an ultraviolet laser-generating device which emits an ultraviolet laser ray as defined in Claim 1;

an illumination optical system for irradiating the ultraviolet laser ray emitted from said ultraviolet laser-generating device upon the object through a coherence reduction optical system, a polarized beam splitter and a group of polarizer elements and an objective lens;

an optical system for forming an optical image of said object, which is

illuminated by said illumination optical system;

a photoelectric converter for converting the optical image, which is formed by said optical system, into a signal upon receipt thereof; and

a defect detection circuit for detecting the defect on said test object upon basis of the signal obtained from said photoelectric converter. --

-- 19. (currently amended) A method for inspecting defects in microscopic patterns formed on an object to be inspected, with using an ultraviolet laser ray, comprising the following steps:

generating an ultraviolet laser ray, utilizing an ultraviolet laser generating device as recited in Claim 1;

illuminating the object with the ultraviolet laser ray through a coherence reduction optical system, a polarized beam splitter and a group of polarizer elements and an objective lens;

forming an optical image of the object from light obtained in said illuminating step;

converting the optical image obtained in said forming step into a signal upon receipt thereof; and

detecting the defect on said object upon basis of the signal obtained in said converting step. --

2. Claims 3, 13, 14, and 17 are cancelled

Examiner's statement of reasons for allowance

The following is an examiner's statement of reasons for allowance:

3. Claims 1,2, and 4-11 were allowed in the previous Office Action.

4. Amended Claims 12, and 19 are allowed because Prior art fails to show a defect inspection apparatus that utilizes an ultraviolet laser generating device housed in a hermetically sealed container that provides particulate contamination control of the output beam, as defined in Claim 1.

Claims 15 and 16 are allowed because they are dependent upon allowed amended Claim 12.

Claims 18 and 20 are allowed because they are dependent upon allowed Claims 1 and 8 respectively

Prior Art does not specifically disclose a defect inspection system that utilizes a laser light source in a hermitically sealed container. The use of a hermetically sealed container to reduce particulate contamination of a defect inspection systems ultraviolet laser source is patentable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications should be directed to Phillip Johnston whose telephone number is (703) 305-7022. The examiner can normally be reached on Monday-Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor John Lee can be reached at (703) 308-4116. The fax phone numbers are (703) 872-9318 for regular response activity, and (703) 872-9319 for after-final responses. In addition the customer service fax number is (703) 872- 9317.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.

PJ
January 15, 2004


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800